BRAIN RESEARCH

VOL. 551 NOS. 1/2 **CONTENTS** **14 JUNE 1991**

Announcement from the Publisher v

Research Reports

Alzheimer amyloid β/A4 peptide binding sites and a possible 'APP-secretase' activity associated with rat brain cortical membranes
D. Allsop, T. Yamamoto, F. Kametani, N. Miyazaki and T. Ishii (Japan) 1

Acetylcholine receptor channel gating and conductance involve extracellular disulfide bond(s)
L. Rojas, C. Zuazaga and A. Steinacker (U.S.A.) 10

Phenytoin and retinal spreading depression
S.R. Chebabo and R.J. Do Carmo (Brazil) 16

Opioid modulation and sensitization of dopamine release elicited by sexually relevant stimuli: a high speed chronoamperometric study in freely behaving rats
J.B. Mitchell and A. Gratton (Canada) 20

Zeta (ζ), a growth-related opioid receptor in developing rat cerebellum: identification and characterization
I.S. Zagon, D.M. Gibo and P.J. McLaughlin (U.S.A.) 28

Specific cholinergic destruction in the basal magnocellular nucleus and impaired passive avoidance behavior of rodents
K. Imaizumi, Y. Kudo, S. Shiosaka, Y. Lee, M. Ikeda, H. Ohta, S. Matano, M. Shoji, T. Honjoh and M. Tohyama (Japan) 36

Axotomy alters putative neurotransmitters in visceral sensory neurons of the nodose and petrosal ganglia
C.J. Helke and A. Rabchevsky (U.S.A.) 44

Role of catecholamines in mediating messenger RNA and hormonal responses to stress
M.S. Harbuz, H.S. Chowdrey, D.S. Jessop, S. Biswas and S.L. Lightman (U.K.) 52

Mercury modulation of GABA-activated chloride channels and non-specific cation channels in rat dorsal root ganglion neurons
O. Arakawa, M. Nakahiro and T. Narahashi (U.S.A.) 58

6R-Tetrahydrobiopterin perfusion enhances dopamine, serotonin, and glutamate outputs in dialysate from rat striatum and frontal cortex
N. Mataga, K. Imamura and Y. Watanabe (Japan) 64

Action of a chronic disulfiram administration on memory decay and on central cholinergic and adrenergic systems
L. Molinengo, L. Oggero, P. Ghi and M. Orsetti (Italy) 72

Galanin and NADPH-diaphorase coexistence in cholinergic neurons of the rat basal forebrain
B.A. Pasqualotto and S.R. Vincent (Canada) 78

Ruthenium red antagonism of the effects of capsaicin mediated by extrinsic sensory nerves on myenteric plexus neurons of the isolated guinea-pig ileum
M. Takaki, A. Kikuta and S. Nakayama (Japan) 87

Commissural responses of rat retrohippocampal neurons
M. Isokawa and D.M. Finch (U.S.A.) 94

Amygdala and dorsal hippocampus lesions block the effects of GABAergic drugs on memory storage
M. Ammassari-Teule, F. Pavone, C. Castellano and J.L. McGaugh (Italy, U.S.A.) 104

Stimulant effect of thyrotropin-releasing hormone and its analog, RGH 2202, on the diaphragm respiratory activity, and their antagonism with morphine: possible involvement of the *N*-methyl-D-aspartate receptors
D.A. Kharkevich, B.A. Chizh and S.A. Kasparov (U.S.S.R.) 110

Intracellular response of caudate neurons to variable frequency stimulation of motor cortical areas in dog
J.S. Wilson and J.A. Wilson (U.S.A.) 116

Prenatal stress alters sexually dimorphic nuclei in the spinal cord of male rats
W. Grisham, M. Kerchner and I.L. Ward (U.S.A.) 126

Ultradian and circadian changes in the cAMP concentration in the preoptic region of the rat
E. Perez, G. Zamboni, R. Amici, L. Fadiga and P.L. Parmeggiani (Italy) 132

Differential sensitivity to hypoxia of the peripheral versus central trajectory of primary afferent axons
D.A. Utzschneider, J.D. Kocsis and S.G. Waxman (U.S.A.) 136

The wobbler mouse: amino acid contents in brain and spinal cord
C. Krieger, T.L. Perry, S. Hansen and H. Mitsumoto (Canada, U.S.A.) 142

Glucose transport is reduced in the blood–brain barrier of aged rats
A.D. Mooradian, A.M. Morin, L.J. Cipp and H.C. Haspel (U.S.A.) 145

Saccade onset and offset lambda waves: relation to pattern movement visually evoked potentials
G.W. Thickbroom, W. Knezevič, W.M. Carroll and F.L. Mastaglia (Australia) 150

Low-dose intrathecal morphine facilitates the spinal flexor reflex by releasing different neuropeptides in rats with intact and sectioned peripheral nerves
Z. Wiesenfeld-Hallin, X.-J. Xu, R. Håkanson, D.-M. Feng and K. Folkers (Sweden, U.S.A.) 157

Repair of the blood–brain barrier following implantation of polymer capsules
C.B. Jaeger, S.R. Winn, P.A. Tresco and P. Aebischer (U.S.A.) 163

Serotonergic sprouting in the neostriatum after intrastriatal transplantation of fetal ventral mesencephalon
Y. Takeuchi, T. Sawada, S. Blunt, P. Jenner and C.D. Marsden (U.K., Japan) 171

Opioid control of the release of Met-enkephalin-like material from the rat spinal cord
S. Bourgoin, E. Collin, J.J. Benoliel, D. Chantrel, A. Mauborgne, M. Pohl, M. Hamon and F. Cesselin (France) 178

Human cochlear nucleus: comparison of Nissl-stained neurons from deaf and hearing patients
H.L. Seldon and G.M. Clark (Australia) 185

(contents continued on p. 360)

Cited in Biological Abstracts (BIOSIS) — Chem. Abstracts — Index Medicus — Current Contents (Life Sci.) — Excerpta Medica (EMBASE) — Psychological Abstracts (PsycINFO) — PASCAL M — Reference Update

Yamamoto, T., see Allsop, D., 1
Yearwood, T., see Milgram, N.W., 236
Yoshizaki, K., see Sato, M., 327
Young, S.J., see Garcia-Munoz, M., 195
Young, S.J., see Garcia-Munoz, M., 207
Yourick, D.L., LaPlaca, M.C. and Meyerhoff, J.L., Norepinephrine-stimulated phosphatidylinositol metabolism in genetically epilepsy-prone and kindled rats, 315

Zagon, I.S., Gibo, D.M. and McLaughlin, P.J., Zeta (ζ), a growth-related opioid receptor in developing rat cerebellum: identification and characterization, 28
Zamboni, G., see Perez, E., 132
Zheng, Y., Barillot, J.C. and Bianchi, A.L., Are the post-inspiratory neurons in the decerebrate rat cranial motoneurons or interneurons?, 256
Zuazaga, C., see Rojas, L., 10

(contents continued)

Terminal excitability of the corticostriatal pathway. I. Regulation by dopamine receptor stimulation
M. Garcia-Munoz, S.J. Young and P.M. Groves (U.S.A.) 195

Terminal excitability of the corticostriatal pathway. II. Regulation by glutamate receptor stimulation
M. Garcia-Munoz, S.J. Young and P.M. Groves (U.S.A.) 207

Effects of administration of dopamine D_2 agonist quinpirole on exploratory locomotion
G.J. Mogenson and M. Wu (Canada) 216

Reinnervation of denervated skeletal muscle by central neurons regenerating via ventral roots implanted into the spinal cord
K.J. Smith and R.T. Kodama (U.S.A., U.K.) 221

Neuron regeneration reverses 3-acetylpyridine-induced cell loss in the cerebral cortex of adult lizards
E. Font, J.M. García-Verdugo, S. Alcántara and C. López-García (Spain) 230

Changes in inhibitory processes in the hippocampus following recurrent seizures induced by systemic administration of kainic acid
N.W. Milgram, T. Yearwood, M. Khurgel, G.O. Ivy and R. Racine (Canada) 236

Controllable and uncontrollable footshock and monoaminergic activity in the frontal cortex of male and female rats
R.P.W. Heinsbroek, F. van Haaren, M.G.P. Feenstra, P. Boon and N.E. van de Poll (The Netherlands) 247

Are the post-inspiratory neurons in the decerebrate rat cranial motoneurons or interneurons?
Y. Zheng, J.C. Barillot and A.L. Bianchi (France) 256

Adrenal medulla and substantia nigra co-grafts in peripheral nerve: chromaffin cells survive for long time periods and prevent degeneration of nigral neurons
L.C. Doering and M.A. Tokiwa (Canada) 267

Protein kinase C and Ca^{2+}/calmodulin-dependent protein kinase II phosphorylate a novel 58-kDa protein in synaptic vesicles
M. Takahashi, Y. Arimatsu, S. Fujita, Y. Fujimoto, S. Kondo, T. Hama and E. Miyamoto (Japan) 279

Short Communications

N-methyl-D-aspartic acid (NMDA) receptor antagonist MK-801 blocks non-opioid stress-induced analgesia. I. Comparison of opiate receptor-deficient and opiate receptor-rich strains of mice
P. Marek, G.G. Page, S. Ben-Eliyahu and J.C. Liebeskind (U.S.A.) 293

Calcium channel antagonists attenuate NMDA receptor-mediated neurotoxicity of retinal ganglion cells in culture
N.J. Sucher, S.Z. Lei and S.A. Lipton (U.S.A.) 297

Domoic acid enhances the K^+-evoked release of endogenous glutamate from guinea pig hippocampal mossy fiber synaptosomes
D.M. Terrian, T.A. Conner-Kerr, T.H. Privette and R.L. Gannon (U.S.A.) 303

A conditioned stimulus decreases extracellular dopamine in the nucleus accumbens after the development of a learned taste aversion
G.P. Mark, D.S. Blander and B.G. Hoebel (U.S.A.) 308

FCCP releases Ca^{2+} from a non-mitochondrial store in an identified *Helisoma* neuron
J.R. Jensen and V. Rehder (U.S.A.) 311

Norepinephrine-stimulated phosphatidylinositol metabolism in genetically epilepsy-prone and kindled rats
D.L. Yourick, M.C. LaPlaca and J.L. Meyerhoff (U.S.A.) 315

Buffy coat from families of Alzheimer's disease patients produces intracytoplasmic neurofilament accumulation in hamster brain
M. Takeda, T. Nishimura, T. Kudo, S. Tanimukai and K. Tada (Japan) 319

Effect of apamin, a toxin that inhibits Ca^{2+}-dependent K^+ channels, on learning and memory processes
C. Messier, C. Mourre, B. Bontempi, J. Sif, M. Lazdunski and C. Destrade (France, Morocco) 322

Response of cytosolic calcium to anoxia and cyanide in cultured glomus cells of newborn rabbit carotid body
M. Sato, K. Ikeda, K. Yoshizaki and H. Koyano (Japan) 327

Calcium channel blockers and excitatory amino acids
R. Karler, L.D. Calder and S.A. Turkanis (U.S.A.) 331

Effects of hypoxia on fetal rat brain metabolism studied in utero by ^{31}P-NMR spectroscopy
C.T. O'Shaughnessy, D.J. Lythgoe, S.P. Butcher, L. Kendall, B. Wood and M.C. Steward (U.K.) 334

Ethanol reduces vasopressin release by inhibiting calcium currents in nerve terminals
X. Wang, J.R. Lemos, G. Dayanithi, J.J. Nordmann and S.N. Treistman (U.S.A., France) 338

Muscarinic agonist-mediated induction of long-term potentiation in rat cerebral cortex
Y. Lin and J.W. Phillis (U.S.A.) 342

Electrophysiological evidence that morphine can exert an antinociceptive effect in a neuropathic state: a study in the ventrobasal thalamus of rats after moderate ligation of one sciatic nerve
G. Guilbaud, J.-M. Benoist and M. Gautron (France) 346

A re-examination of enkephalin's coexistence with gamma-aminobutyric acid in amacrine cells of the larval tiger salamander retina
C.B. Watt (U.S.A.) 351

Effects of nicotinic agonists on the NMDA receptor
E. Aizenman, L.-H. Tang and I.J. Reynolds (U.S.A.) 355

Author Index 358